

ABSTRACT

A first compressor (1a) which supercharges intake air is provided in the intake passage (6, 20, 21) of an internal combustion engine (12). The first compressor (1a) is driven by the exhaust gas energy of the engine (12). A second compressor (2a) driven by an electric motor (2b), and a bypass valve (3) which bypasses the second compressor (2a), are provided in the intake passage (7, 20, 21) between the first compressor (1a) and the engine (12). The bypass valve (3) shifts from the open state to the closed state according to the operation of the second compressor (2a). At this time, the bypass valve (3) starts closing at some time after startup of the second compressor (2a) so that the intake air amount of the engine (12) is not deficient.